ARM, 400 MHz

TwinCAT®3
CX7000 Embedded PC: The new entry-level class with 400 MHz processor and integrated multi-functional I/Os

The CX7000 Embedded PC opens up the convenience and efficiency of the TwinCAT 3 software environment to compact controllers. This further enhances the scalability of PC-based control technology from Beckhoff — ranging from mini-PLCs to many-core Industrial PCs. An advanced 400 MHz processor and built-in configurable I/Os mean the Embedded PC delivers an optimum price/performance ratio.
Equipped with an ARM Cortex™-M7 processor (32 bit, 400 MHz), the CX7000 Embedded PC makes considerably higher processing power available in the low-cost, compact controller segment. Furthermore, all the advantages of the TwinCAT 3 software generation can be utilised, while an extremely compact design with dimensions of just 49 x 100 x 72 mm ensures optimum scalability of PC-based control for small controller applications that typically require minimum footprint.

With multi-functional I/O channels directly integrated, the CX7000 assures excellent value for money:
- 8 digital inputs, 24 V DC, 3 ms filter, type 3
- 4 digital outputs, 24 V DC, 0.5 A, 1-wire technology

These integrated multi-functional I/Os can be configured for other operating modes via TwinCAT 3, enabling the option to use fast counting or processing of analog values:
- counter mode: 1 x 100 kHz digital counting pulse input, 1 x digital input with counting direction increment/decrement, 2 x digital counter outputs
- incremental encoder mode: 2 x digital inputs for 100 kHz encoder signal, 2 x digital encoder outputs
- analog signal mode: 2 x digital inputs configured as analog inputs 0…10 V, 12 bit
- PWM signal mode: 2 x digital outputs configured for PWM signal

If additional electrical signal types need to be processed, the CX7000 can be expanded very easily on demand by adding EtherCAT Terminals or Bus Terminals to the integrated I/Os. Additional I/O terminals will be directly attached to the CX7000.

The Embedded PC is equipped with 512 MB MicroSD flash memory (with the option to upgrade to 1, 2, 4 or 8 GB) and is suitable for operating temperatures between -25 and +60 °C. An Ethernet interface (10/100 Mbit/s, RJ45) serves as the programming interface. This means that the space-saving CX7000 is ideal for use as a cost-effective, stand-alone compact controller. In the CX7080 version, peripheral devices such as displays, scanners or weighing systems can be connected via an additional serial interface (RS232/RS485).

“With the CX7000, users of small controllers can now also benefit from the advantages of TwinCAT 3 and the great EtherCAT device variety.”

Ralf Vienken, Senior Product Manager
Fieldbus Systems and Embedded PC
Further information:
www.beckhoff.com/cx7000

Product announcement
Estimated market release: 3rd Quarter 2019